REMARKS

I. Responses to Examiner's Remarks

Applicant appreciates the Examiner's careful attention to this application. Reconsideration of the application is respectfully requested. Claims 1-36, 69, 79 and 89 are currently pending (Claim 37 has been cancelled). Claims 11, 13, 26, 36, 69, and 79 have been withdrawn. Claims 1-10, 12, 14-25, 27-35 and 89 are currently under examination. All claims under examination have been rejected. Applicant is pleased to note that all claims are deemed by the Office to meet the requirements of 35 U.S.C. §§ 101 and 112.

II. Discussion of Amendments

Applicant amends the claims herein. Applicant submits that no new matter has been added to the claims. Applicant makes these amendments for the sole purpose of facilitating the expeditious allowance of any subject matter identified as allowable by the Examiner. Applicant makes no admission herein that any cancelled or amended claims in their original form is non-patentable; Applicant makes no disclaimer of the subject matter of any cancelled or amended claims or dedicate them to the public. If any such disclaimers are believed to have been made, Applicant explicitly rescinds them for the purpose of future applications to permit recapture of the original subject matter of any cancelled or amended claims. Applicant reserves the right to file future applications for letters patent directed to the original subject matter of any cancelled or amended claims.

Applicant has amended Claim 1 to recite the additional element of "wherein the second pair of target enrichment primers binds to the inside of the first set of target

enrichment primers." This element is disclosed in the specification of the International Application on page 9, lines 4-5 (paragraph [0025] of the published U.S. application), and is illustrated in Fig. 1A.

Applicant has amended Claim 2 to recite a "first pair of target enrichment primers comprises a reverse outer (R_o) and a forward outer (F_o) primer," a "forward inner (F_i) and a reverse inner (R_i) primer," and a "forward super primer (FSP) and a reverse super primer (RSP)." These elements are disclosed in the specification of the International Application on page 8, lines 25-28 (paragraph [0025] of the published U.S. application).

Applicant has cancelled Claim 37, which requires no particular form of additional support in the specification.

Applicant submits the amendments introduce no new matter and respectfully request their entry.

III. Interview Summary

A telephonic interview was conducted at 14:00 EDT on 26 May 2010. Present were Examiner Mark Staples, attorney Greg Peterson, and attorney Nick Landau. Those present discussed Claim 1 in light of U.S. Patent 7,262,030 to Xiangning Chen and U.S. Patent Publication 2003/0096277 to Chen. Applicants' attorneys explained the patentable differences between Claim 1 and each of the two references. Those present also discussed the possibility of the present amendments to Claim 1 and Claim 2 to clarify the claimed subject matter. No agreement was reached.

III. Claim Rejections Under 35 U.S.C. § 102

The Examiner has rejected Claims 1-10, 12, 14-22, 27, 29-34 and 37 as anticipated by U.S. Patent 7,262,030 to Xiangning Chen (the '030 patent). Applicant respectfully traverses the rejection.

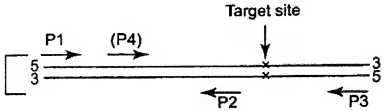
A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

In this case, the '030 does not teach every element set forth in the claims, in as complete detail as is contained in the claims, and as arranged as required by the claims.

As Claim 1 is the independent claim on which Claims 2-10, 12, 14-22, 27, and 29-34 depend (directly or indirectly), Applicant calls the Examiner's attention to Claim 1, which recites in relevant part:

> ...carrying out a first amplification reaction for each target sequence to be amplified using i) as a template, a nucleic acid from each of said plurality of agents, said nucleic acid containing said target sequence; ii) a first pair of target enrichment primers hybridizing to said nucleic acid and bracketing said target sequence; a second pair of target enrichment primers hybridizing to said nucleic acid and bracketing said target sequence, said second pair of target enrichment primers being located proximate to said target sequence and one of the second pair of target enrichment primers comprising at its 5' end a binding tag corresponding to the sequence of one of a pair of target amplification primers and the other of the second pair of target enrichment primers comprising at its 5' end a binding tag corresponding to the sequence of the other of said pair of target amplification primers, wherein the second pair of target enrichment primers binds to the inside of the first set of target enrichment primers...

The '030 patent does not describe an amplification reaction involving two pairs of primers, both of which bracket a target sequence, and in which the second pair binds to the inside of the first pair. To help illustrate this point, Figure 1 of the '030 is reproduced below, showing the fundamental mechanism of the method disclosed therein for producing amplification products that are ligatable structures and sequencible structures.



As explained in the legend of this figure, P1 and P3 are "outer primers" and P2 is an "inner primer." P4 is an optional inner primer. The optional inner primer is empoyed in embodiments described in the '030 in which nested PCR is employed, using two primer pairs (see column 4, lines 35-63). The optional inner primer is not employed in methods of producing hybrid DNA with a single strand overhang (see column 3 lines 30-53). Both types of embodiments are discussed below, and neither teaches every element of Claim 1.

Applicant assumes the Examiner interprets the outer primers as teaching Applicant's claimed "first pair of target enrichment primers" and the inner primers as teaching Applicant's "second pair of target enrichment primers."

Turning to the figure, the horizontal lines each represent a single DNA strand in a double-stranded DNA duplex. The numbers 5 and 3 represent the 5' ends and 3' ends of the strands. The arrows on the primers indicate the DNA synthesis will occur in the 5' to 3' direction originating at each primer. The arrows are positioned above and below the

regions of a given strand to which a primer will presumably hybridize. The small "x" on each strand represents the target.

As can be seen in the top frame of Figure 1 of the '030 reproduced above, the outer primers (P1 and P3) bracket the target. It can be seen that the "x" is positioned in the 3' direction relative the binding locations of P1 and P3, and in between P1 and P3. As a result, DNA synthesis originating at either P1 or P3 will copy the target. One skilled in the art would expect the amplification product of P1 and P3 to include the target.

In contrast, note that the target is in the 5' direction relative to the inner primer, P2. As a result, DNA synthesis originating at P2 will not include the target, because DNA synthesis proceeds in the 5' to 3' direction. .

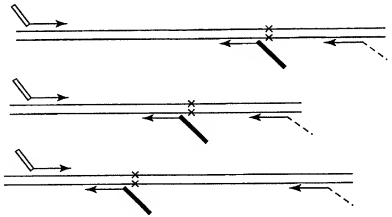
To anticipate a claim, the elements in a cited reference must be arranged as required by the claim. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). Claim 1 recites in part "a second pair of target enrichment primers hybridizing to said nucleic acid and bracketing said target sequence..." The inner primers, P2 and P4, cannot be said to in any way "bracket" the target as claimed. That is to say, the target does not lie between P2 and P4.

In fact, the P2 inner primer cannot be positioned upstream (in the 5' direction) of the target, or the methods described in the '030 patent would not function as intended. The '030 patent describes a method of genotyping by generating a ligatible structure in which the 3'->5' strand excludes the target sequence and the 5'->3' target sequence includes the target sequence; and by generating a sequencable structure in which the 3'->5' strand includes the target sequence but the 5'->3' strand excludes the target structure.

If the P2 inner primer is not in the 5' direction relative the target, it cannot bracket the target for the purposes of PCR amplification.

The Examiner states that the '030 patent teaches a pair of outer primers that bracket the target and a pair of inner primers that bracket the target in claim 1, claim 11, Figure 1, Figure 2A, and Figure 2B. Applicant respectfully points out that none of these teach outer and inner primers that bracket the target. Claim 1 describes only three primers. As a "pair" of primers refers to two (2) primers, Claim 1 cannot disclose two pairs of primers. Furthermore, Claim 1 specifies that the inner amplicon excludes the target, making it impossible that any pair of inner primers could bracket the target. Claim 11 describes a pair on inner primers, but states explicitly that they do not bracket the target ("wherein said inner PCR primer pair forms a second PCR product which contains a portion of said first PCR product but does not contain said target site" – it must therefore follow that the target site is not between the inner primers).

Figure 1 plainly does not illustrate an inner primer pair that brackets a target site. As explained above, the target site (x) is not positioned between the inner primers (P2 and P4). Figure 2A does not illustrate an inner primer pair that brackets the target site. That figure is reproduced below for the Examiner's reference:



As explained in the figure legend, the open box indicates the upper 5' end primer that may be the forward inner (P4) or forward outer (P1) primer. The solid box indicates the lower primer downstream of the target that is the reverse inner (P2) primer. The dotted line indicates the lower primer upstream of the target sequence that is the reverse outer (P3) primer. As the inner primer pair consists of P4 (open box) and P2 (solid box), and it is clear from the Figure that the target sequence does not fall between P4 and P2, the inner primer pair does not bracket the target sequence in this figure.

The Examiner has concluded that Figure 2B shows the inner primer pair bracketing the target. Figure 2B of the '030 patent does not show the target. Figure 2B illustrates the structure of an inner primer, showing a common domain and indicating the identity of restriction sites thereon.

In response to Applicant's comments of November 4, 2009, the Examiner responded that the '030 patent teaches that the pair of inner primers can amplify the target sequence. To the contrary, the '030 states in no fewer than twelve places that the inner pair of primers does not amplify the target itself, and that the inner amplicon excludes the target site (see abstract; claim 1; claim 3; claim 11; column 3 lines 39-40 ("an inner amplicon which excludes the target sequence"); column 3 lines 63-64; column 5 lines 11-13 ("the inner primer pair amplifies part of the same portion of the DNA molecule that is amplified by the outer primer pair, but excludes the target sequence"); column 7 lines 12 ("the inner amplicon excludes the target site"); column 4 lines 41-42; column 4 line 64 to column 5 line 3; column 7 lines 19-21 ("The P1-P3 outer primer set flanks the indicated target site whereas the P1-P2 inner primer pair does not"); and column 7 lines 25-28 ("The smaller of the two amplicons, the inner amplicon, contains

base pairs which lie within the bounds of the larger outer amplicon (i.e. is "nested" within the larger amplicon), but does not contain the target site"). As stated above, the methods of the '030 patent would be inoperable if modified such that the inner primer pair was positioned to bracket the target. Otherwise, they could not generate a ligatible structure in which the 3'->5' strand excludes the target sequence and the 5'->3' target sequence includes the target sequence; and they could not generate a sequencable structure in which the 3'->5' strand includes the target sequence but the 5'->3' strand excludes the target structure.

The Examiner cited column 5 lines 32-44 of the '030 as disclosing that the target may be amplified by both inner and outer primer. That excerpt reads as follows:

> Similarly, in other embodiments of the present invention, it may be desirable to PCR amplify more than one target site at a time. In some cases, this may be carried out by a multiplex PCR reaction in which inner and outer primers for all target sites of interest are amplified simultaneously in a single reaction. Alternatively, one or more sites may be amplified together, or each site may be amplified alone, either in a single reaction with both inner and outer primers, or in two reactions, one for the inner and one for the outer primers as described above. Any combination of PCR amplification reactions may be utilized in the practice of the present invention, so long as the procedure results in the production of suitable sequencible and/or ligatible structures.

The Examiner emphasized that "one or more sites may be amplified... in a single reaction with both inner and outer primers." Strictly speaking, this does not disclose that the target sequence is amplified by both pairs of primers. Numerous sites could be amplified simultaneously using inner and outer primers, in accordance with the ubiquitous teaching of the '030 that the inner primers do not bracket the target. It is clear that the '030 teaches the use of the inner primers not to amplify the target sequence, but to amplify regions that do not include the target sequence, but which are complementary to

amplification products that do include the target sequence, and which upon hybridization with amplification products that do include the target sequence will form ligatible products and sequencible products. In fact, this is emphasized at the end of the passage cited by the Examiner ("Any combination of PCR amplification reactions may be utilized in the practice of the present invention, so long as the procedure results in the production of suitable sequencible and/or ligatible structures"). As the '030 recites in many places, the sequencible structure must include a 5'->3' strand that excludes the target sequence, and the ligatible structure must comprise a 3'->5' strand that excludes the target sequence.

The '030 patent sums up the possibility that the inner primer pair could bracket the target: "Those of skill in the art will recognize that placement of the P2 primer can be anywhere between the target site and the other primer of the inner primer pair, so long as a useful PCR product is produced by PCR amplification of the inner primer pair, and the target site itself is not amplified" (column 8, lines 42-46).

The Examiner wrote on page 4 of the Office Action "Thus while Chen '970 [the '030 patent] teaches embodiments other than the claimed invention, Chen '970 teaches embodiments of the claims and thus anticipates the claimed invention." Applicant respectfully points out that, although the Examiner has cited various passages of the '030 patent, the Examiner has not identified any embodiment in the '030 patent that teaches every element of the claims. Silence in the cited reference regarding a claimed element cannot be construed as an explicit teaching of the claimed element.

The '030 patent does not teach every element of Claim 1 as arranged in that claim. Claims 2-10, 12, 14-22, 27, and 29-34 depend on Claim 1, and so incorporate

every element of Claim 1. If the '030 does not teach every element of Claim 1, it does not teach every element of Claims 2-10, 12, 14-22, 27, and 29-34 either. Therefore the '030 patent does not anticipate Claims 2-10, 12, 14-22, 27, and 29-34. Accordingly, Applicant respectfully requests the rejection be withdrawn.

IV. Rejections Under 35 U.S.C. § 103

Claims 1-10, 12, 14-25, 35, and 89 were rejected as obvious over various combinations of U.S. Patent Publication 2003/0096277 to Chen (the '277 publication), U.S. Patent 5,314,809 to Erlich (Erlich), U.S. Patent 5,811,235 to Jeffries (Jeffries), and the instruction manual of Qiagen. Applicant respectfully traverses the rejection.

To support a finding of obviousness, the Examiner must identify prior art that teaches or suggests every element of the claim. However, there must be some rational basis given for combining elements from diverse prior art references or for modifying the teaching of a prior art reference. Legally recognized rationales include: (A) Combining prior art elements according to known methods to yield predictable results; (B) Simple substitution of one known element for another to obtain predictable results; (C) Use of known technique to improve similar devices (methods, or products) in the same way; (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results; (E) "Obvious to try" - choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success; (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art; (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to

modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

In this case, although the Examiner has alleged that the cited references teach various elements of the rejected claims, scrutiny of the cited references reveals that they do not.

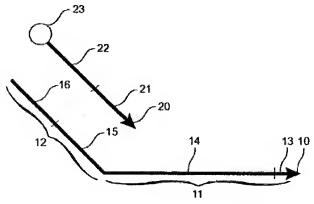
A. Rejections of Claims 1-10, 12, 14-23 and 27-34

The Examiner has rejected Claims 1-10, 12, 14-23 and 27-34 as obvious in light of the combination of the '277 publication, Jeffreys, Erlich, and QIAGEN. Because Claims 2-10, 14-23, and 27-34 depend on Claim 1 (directly or indirectly), Applicant directs the Examiner's attention to Claim 1, which recites in relevant part:

> ...carrying out a first amplification reaction for each target sequence to be amplified using i) as a template, a nucleic acid from each of said plurality of agents, said nucleic acid containing said target sequence; ii) a first pair of target enrichment primers hybridizing to said nucleic acid and bracketing said target sequence; iii) a second pair of target enrichment primers hybridizing to said nucleic acid and bracketing said target sequence... wherein the second pair of target enrichment primers binds to the inside of the first set of target enrichment primers

The Examiner relies on the '277 publication to teach the element of a first and second pair of target enrichment primers bracketing a target sequence. In each case the Examiner cites Figure 1, Figure 2A (especially elements 10A, 10B, and 30), Claim 10, paragraph [0019] and paragraph [0072]. The Examiner has declined to state which components in the '277 publication represent the elements of the rejected claims.

Figure 1 of the '277, reproduced below, is particularly illustrative as to why the primers disclosed in the '277 do not bracket a target sequence.



Turning to paragraph [0018], the structure of the primers shown in Figure 1 is explained. Part 10 is a primary primer, whereas part 20 is a secondary primer. Applicant is uncertain as to whether the Examiner takes one or both of the illustrated structures to be the first pair of target enrichment primers or the second pair of target enrichment primers, or both, as it is not stated in the Office Action. Applicant respectfully points out that the secondary primer cannot be a member of either the first or the second pair of enrichment primers, because Claim is directed to "a first pair of enrichment primers hybridizing to said nucleic acid" and "a second pair of target enrichment primers hybridizing to said nucleic acid" in which the nucleic acid is "a nucleic acid from each of said plurality of agents." The '277 publication explains that the secondary primer does not hybridize to the nucleic acid that is the target of analysis; the secondary primer hybridizes to the artificial element **12** of the primary primer. This is explained in paragraph [0033] and in other places. The ability of the secondary primer to bind to the artificial element of the primary primer allows the secondary primer to be used to prime a second and separate round of amplification that specifically amplifies the amplification products of the primary primers.

The primary primer cannot be part of a pair that brackets the target. This is because the primary primer hybridizes to the target. Turning back to Figure 1, it can be seen that the primary primer **10** comprises an allele element **13**. It is explained in paragraph [0032] that the allele element is complementary to the target itself:

> Specificity domain **11** is on the 3' end of the primer and contains sequences which are complementary to the sequence of the target site and one allele of interest. Specificity domain **11** itself contains two elements: allele element **13** (which may contain a single nucleotide representing an SNP variant and renders the forward primer specific for one allele) and target element 14. The sequence of target element 14 is complementary to sequences immediately 5' to the SNP site and renders the primer specific for the targeted locus, but not necessarily for the allele. Allele specificity is conferred by allele element 13.

Because the primary primers of the '277 publication bind directly to the target sequence, the target sequence cannot be part of the region that is bracketed by the primary primers.

Turning to Figure 2 (as explained in paragraph [0019]), in which the Examiner has emphasized elements 10A, 10B, and 30, again no primer pairs are shown that bracket the target sequence and hybridize to the nucleic acid that contains the target sequence. Parts 10A and 10B are primary primers. As explained above, the primary primers used in the technology of the '277 publication hybridize directly to the target sequence, and do not bracket the target sequence. This can be seen in detail in Figure 2 B, which shows in bold that the two primary primers for Allele 1 and Allele 2 both include a nucleotide that is complementary to the target SNP site. The two distinct primary primers both bind to the same region but differ in terms of the target SNP site (see the explanation in paragraph [0035]).

The Examiner also cites Claim 10 of the '277 publication as teaching the elements of "a first pair of enrichment primers hybridizing to said nucleic acid" and "a second pair

of target enrichment primers hybridizing to said nucleic acid" in which the nucleic acid is "a nucleic acid from each of said plurality of agents." Claim 10 teaches two primers: a primary and a secondary. Claim 10 states that the secondary primer comprises "a second homologous portion which comprises sequences identical to those of said non-homologous portion of said primary primer." Based on this, the secondary primer is not disclosed hybridize to the nucleic acid from said plurality of agents as claimed. It is disclosed to hybridize to the primary primer.

Claim 10 fails to disclose that the primary primer brackets the target sequence. For that matter, Claim 10 fails to disclose pairs of primers, reciting "at least one" primary and secondary primer. Although Claim 10 is silent regarding the possible locations of the primary and secondary primer relative to the SNP target site, the specification is clear that the primary primer binds directly to the SNP target site, and thus cannot bracket the target site.

Applicant submits that paragraph [0072], which is cited by the Examiner to teach the first and second primer pair, although mentioning the use of primers, does not disclose the elements of "a first pair of enrichment primers hybridizing to said nucleic acid and bracketing said target sequence" and "a second pair of target enrichment primers hybridizing to said nucleic acid and bracketing said target sequence" in which the nucleic acid is "a nucleic acid from each of said plurality of agents."

In conclusion, the '277 publication neither teaches nor suggests the claimed elements of "a first pair of enrichment primers hybridizing to said nucleic acid" and "a second pair of target enrichment primers hybridizing to said nucleic acid" in which the nucleic acid is "a nucleic acid from each of said plurality of agents" from Claim 1. The

remaining cited references of Jeffreys, Erlich, and QIAGEN do not teach or suggest the missing elements. Therefore, the cited references do not render Claim 1 obvious. If an independent claim is non-obvious under 35 U.S.C. § 103, then any claim depending on the independent claim is non-obvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); MPEP § 2143.03. Seeing as Claims 2-10, 12, 14-23 and 27-34 depend on Claim 1, Claims 2-10, 12, 14-23 and 27-34 are not obvious, either. Applicant accordingly respectfully requests withdrawal of the rejection.

B. Rejection Over Jeffreys

On pages 19-20 of the Office Action, the Examiner states that Jeffreys teaches various claim elements, "regarding claims 1-3 and 28." Applicant assumes that Claims 1-3 and 28 were rejected as obvious in light of Jeffreys.

The Examiner states that Figure 15, Figure 27, and Example 15 teach a first pair of target enrichment primers hybridizing to the nucleic acid and bracketing the target sequence and a second pair of target enrichment primers hybridizing to said nucleic acid and bracketing said target sequence.

Applicant respectfully notes that Figure 15 shows a schematic diagram of human chromosome 11. Two CFTR mutations are shown: G551D and R553X. Two primers are shown, each of which bind to the target locus (the R553X primer binds to the R553X locus and the G551D primer binds to the G551D locus). Figure 15B shows the R553X primer binding to its target: the R553X locus (and thus blocking binding by the G551D primer). Figure 15C shows both primers bound to their targets.

Figure 15 does not show a primer pair bracketing a target. Even assuming for the sake of argument that it is implicit that each forward primer would have a reverse-primer

pair-mate (Applicant does not admit this assumption), the fact that the two forward primers bind their targets directly demonstrates that this figure does not disclose a primer pair bracketing a target. Furthermore, Figure 15 neither teaches nor suggests the use of a second pair of target enrichment primers hybridizing to said nucleic acid and bracketing said target sequence.

Figure 27 shows the structure of the MS31 locus, a hyper-variable tandem repeat region found in humans. Although this figure shows various primer positions, it does not teach using a given pair bracketing the target sequence, nor does it teach the use of a second pair of target enrichment primers hybridizing to said nucleic acid and bracketing said target sequence.

The Examiner cites example 15 is Jeffrey as teaching "there are four primers being a first pair and a second pair." However, there is no teaching in example 15 of a second pair of target enrichment primers hybridizing to the nucleic acid from each of a plurality of agents and bracketing the target sequence used in the first amplification reaction. The second pair of primers in Example 15 do not hybridize to the nucleic acid being analyzed, but rather to the tails of the first pair of primers.

In conclusion, Jeffery does not teach or suggest every element of Claim 1. Consequently, Jeffrey does not render Claim 1 obvious. If an independent claim is non-obvious under 35 U.S.C. § 103, then any claim depending on the independent claim is non-obvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); MPEP § 2143.03. Seeing as Claims 2, 3, and 28 depend on Claim 1, Claims 2, 3, and 28 are not obvious, either. Applicant accordingly respectfully requests withdrawal of the rejection.

C. Rejection of Claims 24 and 25

On page 22 of the Office Action the Examiner rejected Claims 24 and 25 as obvious over the combination of the '030 patent, the '277 publication, Jeffreys, Erlich, Qiagen, and Elnifro. The '030 patent is relied upon to teach every element of the claims except for the enumerated pathogenic agents of Claims 24 and 25. As Applicant has explained why the '030 patent does not teach every element of Claim 1, and as Claims 24 and 25 depend on Claim 1, Applicant respectfully submits that Claims 24 and 25 are not obvious over the cited references. Applicant accordingly respectfully requests withdrawal of the rejection.

D. Rejections of Claim 35

On pages 23-24 of the Office Action the Examiner rejected Claim 35 as obvious over the combination of the '030 patent or the '277 publication, Jeffreys, Erlich, and Qiagen with U.S. Patent 5,194,300 to Cheung. The '030 patent or the '277 publication, Jeffreys, Erlich, and Qiagen are relied upon to teach every element of the claims except for the fluorescent microspheres. As Applicant has explained why the '030 patent or the '277 publication, Jeffreys, Erlich, and Qiagen do not teach every element of Claim 1, and as Claim 35 depends on Claim 1, Applicant respectfully submits that Claim 35 is not obvious over the cited references. Applicant accordingly respectfully requests withdrawal of the rejection.

E. Rejection of Claims 24, 25 and 89

On page 25 of the Office Action the Examiner rejected Claims 24, 25, and 89 as obvious over the combination of either one of (1) the '030 patent or (2) the '277 publication, Jeffreys, Erlich, and Qiagen with Archard and Shuber. The Examiner relies on either one of (1) the '030 patent or (2) the '277 publication, Jeffreys, Erlich, and

Qiagen to teach every element of the claims except the detection of Coxsackie B virus. As Applicant has explained why the '030 patent or the '277 publication, Jeffreys, Erlich, and Qiagen do not teach every element of Claim 1, and as Claims 24, 25, and 89 depend on Claim 1, Applicant respectfully submits that Claims 24, 25 and 89 are not obvious over the cited references. Applicant accordingly respectfully requests withdrawal of the rejection.

CONCLUSION

Applicant respectfully requests the consideration of the enclosed remarks and entry of the following submission into the record, in response to the Office Action dated February 18, 2010. Reconsideration in light of this submission is respectfully requested. If additional action is required that may benefit from a telephone call, Applicant invites a call to its attorney of record, Nicholas J. Landau (Reg. No. 57,120). E-mail correspondence and transactions to nlandau@babc.com are authorized and encouraged.

Applicant has diligently sought to comply with all requirements and to correct all informalities and rejections. The Application is believed to be in condition for allowance, and a timely Notice of Allowance is respectfully requested.

Respectfully submitted,
BRADLEY ARANT BOULT CUMMINGS LLP

18 June 2010
Date

Nicholas J. Landau
Reg. No. 57,120